

ZAYTSEV, N. A.

ZAYTSEV, N. A.: "The use of special exercises to develop speed in running over short distances." State Order of Lenin and Order of Labor Red Banner Inst of Physical Culture imeni P. F. Lesgaft. Leningrad Order of Lenin State U imeni A. A. Zhdanov. Leningrad, 1956. (Dissertation for the Degree of Candidate in Pedagogical Sciences).

Source: Knizhnaya letopis' No. 28 1956 Moscow

ZAYTSEV, N.A.

ZAYTSEV, N.A., inzhener.

Ships with underwater wings. Rech.transp.16 no.8:19-22 Ag '57.
(MIRA 10:11)

(Ship propulsion)

ZAYTSEV, N.

Methods used by the U.S.A. credit system to exploit farmers. Len.
i kred. 20 no.1:78-85 Ja '62. (MIRA 15:1)
(United States--Agricultural credit)

ZAYTSEV, N., polkovnik

Training of artillery scouts. Voen.vest. 41 no.12:75-76 D '61.
(MIRA 15:3)

(Military reconnaissance)

ZAYTSEV, N.

Work of veterinary specialists of Osipenko District, Zaporozh'ye
Province. Veterinariia 33 no.3:13-17 Mr '56. (MLRA 9:5)
(OSIPENKO DISTRICT--VETERINARY MEDICINE)

ZAYSTEV, N.

Using mixed brigades in housing construction. Stroitel' no.1:14 Ja '59.

1. Nachal'nik sektora truda i zarabotnoy platy tresta No.20, Leningrad.
(Leningrad--Building)

ZAYTSEV, N.

Yaransk District veterinary hospital in Kirov Province.
Veterinariia 32 no.3:15-22 Mr '55. (MLRA 8:4)
(YARANSK DISTRICT--VETERINARY MEDICINE)

ZAYTSEV, N.

BELOUSOV, M.; ZAYTSEV, N.

Lowering handling costs in the food business. Sov. tovg. no. 6: 30-32
Je '57. (MLRA 10:8)

(Food industry--Costs)

ZAYTSEV, N., polkovnik

Japanese air force. Av. i kosm. 45 no.6:94 '62.

(MIRA 15:10)

(Japan--Air force)

ZAYTSEV, N., polkovnik; BOGDANOV, M., podpolkovnik

Training in firing at surface targets. Voenn. vest. 42 no.5:
73-75 My '63. (MIRA 16:5)

(Russia--Army--Artillery)

ZAYTSEV, N.

KARYAKIN, I., master In'venskogo uchastka.; ZAYTSEV, N., master
formirovochnogo uchastka.

Our rafts can withstand the force of any storm. Mast.Lesa.
no.4:12-14 Ap '57. (MIRA 10:10)

1.Kamskaya gidroelektrostantsiya, In'venskiy reydy, Molotovskaya
oblast'.

(Lumber--Transportation)

BOCHAROV, F.; DOBRA, A.; ZAYTSEV, M.; KALUTSKIKH, N.; KOMOGORTSEV, N.;
KOPANITSA, Ya.; MIKHAYLENKO, I.; PLIKHIN, P.; PODZHAROV, P.;
RUZOV, M.; SEMENOV, N.; STAKHANOV, A.; USKOV, A.

Foma Evgen'evich Tiurin; an obituary. Mast. ugl. 7 no.11:32 N '58.
(MIRA 11:12)

(Tiurin, Foma Evgen'evich, 1898-1958)

ZAYTSEV, N.; BULANOV, N.; KOTLYAREVSKIY, N.

Mechanized production line for the preparation of sausage filling.
Mias.Ind.SSSR 33 no.2:14-15 '62. (MIRA 15:5)
(Sausages) (Assembly-line methods)

ZAYTSEV, N., polkovnik; FEDOSEYEV, M., podpolkovnik

Tactical and construction exercises with the division. Voen. vest.
43 no.6:89-91 Je '63. (MIRA 16:6)
(Artillery drill and tactics)

VARZIN, N.; YESIPOV, V.; ZAYTSEV, N.

Economics training of agricultural specialists. Vop. ekon. no.10:
149-151 0 '63. (MIRA 16:12)

1st AND 2ND COVER										1st AND 2ND COVER									
PROCESSES AND PROPERTIES INDEX																			
<div style="font-size: 2em; font-weight: bold;">SA</div> <div style="font-style: italic;">in file</div>					<div style="font-size: 2em; font-weight: bold;">A 54</div> <div style="font-size: 2em; font-weight: bold;">C</div>														
<p>4705. Photo-Cells with Sb-Cs Photocathodes. N. Zaitsev. J. Techn. Phys. U.S.S.R. 9, 8, pp. 661-672, 1939. In Russian.—Continuing previous work of the author and M. Khlebnikov [see preceding Abstract], further experimental support is found for the conclusion reached. The influence of various technical factors in the preparation of the cathodes on their integral sensitivities is examined. Various constructions of photo-cells made possible by the special properties of the Sb-Cs cathodes are described and their performances discussed. D. S.</p>																			
<p>ASR-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																			
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SYNOBISH ONE ONLY ONE										BOWARY ONE ONLY ONE									
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4704. Compound Photokathodes. N. Khlebnikov and N. Zaitsev. *J. Techn. Phys. U.S.S.R.* 9, 1, pp. 44-63, 1939. *In Russian.*
From experimental investigations on the photoelectric properties of Sb-Ca and similar cathodes it is concluded that the Sb-Ca forms a semiconducting layer with an internal photoelectric effect. [See Abstract 4412 (1939) and following Abstract.] D. S.

ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100025-6

Coal of Siberia and of the Far East. Mast. ugl. 8 no.2:3-5
F '59. (MIRA 13:4)

1. Nachal'nik otdela ugol'noy, torfyanoy i slantsevoy promy-
shlennosti Gosplana RSFSR.
(Siberia--Coal mines and mining)
(Soviet Far East--Coal mines and mining)

ZAYTSEV, M.YU.

ZAYTSEV, M.Yu.

Needle for local anesthesia in the thorax. Probl.tub. 35 no.5:113
'57. (MIRA 10:11)

1. Iz khirurgicheskogo otdeleniya (zav. M.Yu.Zaytsev) Tomskogo
oblastnogo protivotuberkuleznogo dispensera (glavnyy vrach A.I.
Titova)
(ANESTHETICS--ADMINISTRATION)

YERSHOV, Ye.F.; ZAYTSEV, M.V.; GORODETSKOV, A.P., inzh., retsenzent;
KALININ, V.K., kand. tekhn. nauk, red.; VASIL'YEVA, N.N.,
tekhn. red.

[Operation of VL60 electric locomotives; experience of the
Gorkiy railroad] Ekspluatatsiya elektrovozov VL60; opyt
Gor'kovskoi dorogi. Moskva, "Transport," 1964. 62 p.
(MIRA 17:2)

ZAYTSEV, M.S.

Experiment in raising grapes along a wall at the Main Botanical
Garden. Biul. Glav. bot. sada no.28:104-110 '57. (MIRA 11:1)

1. Glavnyy botanicheskiy sad Akademii nauk SSSR.
(Moscow Province--Viticulture)

COUNTRY : USSR
 CATEGORY :

M-8

ABS. JOUR. : RZBiol., No. 19, 1957, No. 87261

AUTHOR : Zaytsev, M. S.
 INST. : Main Botanical Garden. Academy of Sciences
 TITLE : Experience with Growing Grapevines at a
 Wall in the Main Botanical Garden.

ORIG. PUB. : Byul. Gl. botan. sada, AN SSSR, 1957,
 No 28, 104-110

ABSTRACT : Grapes were grown on the south side of a wooden wall 1.7 m high. This ensured higher temperature of the air and earlier maturation of berries and canes. To extend growing period additional protection by means of glazed sash and straw mats was provided in spring and fall. Best growing and yielding a fully ripe crop are European early varieties: Seyanets Malengra, Zhemchug Saba, Madeleine Angevin, etc. Cultural procedures applied to the above-ground parts are aimed at control of growth and acceleration of cane maturation, for which it is recommended to use repeated pinching back, cutting out of lateral shoots, and pruning. Winter cover: 5 cm of sand, 25 cm of oak leaves.

CARD: 1/2
 USSR.

- ZAYTSEV'S, M.P. -

CONFERENCE ON AUTOMATIC CONTROL OF WELDING PROCESSES (USSR)

Avtomaticheskaya svarka, no. 4, Apr 1963, 95-96.

S/125/63/000/004/011/011

At a conference held on 21-28 December 1962 under the auspices of the Electric Welding Institute, Ukrainian Academy of Sciences, numerous papers were delivered reporting on results of research in the field of automatic control of welding processes. Academician B. Ye. Paton reported on achievements in the research and development of new automatic control systems for arc, electroslag, resistance, and electron-beam welding, giving particular attention to program and cybernetic systems. M. E. Zaytsev's report dealt with contactless ferro-transistor control systems for resistance welders. Engineer P. L. Chuloshnikov spoke on instruments for measuring resistance-welding parameters, as well as on control devices and resistance welders for light alloys. Engineers A. P. Obolonskiy and A. B. Koval' presented papers on automatic-control systems for electron-beam welding. Engineer R. M. Shirokovskiy discussed automatic guiding of the electrode along the joint in welding gas pipes.

[WB]

Card 1/1

L 43925-66

ACC NR: AP6027440

welded in an MTPT-400² spot welder. It was found that the electrode push-back is the most sensitive indicator of the nugget diameter and thickness; it reflects quantitatively the process of nugget formation. A decrease in nugget diameter by 0.3—0.5 mm reduced the push-back by about 0.01 mm. With welds of satisfactory quality, the average magnitude of push-back is 4—5% of the total thickness of welded sheets, with deviations of 3.5—5%. With a lack of fusion, the magnitude of push-back is only one half the above value. On the basis of these results, the MTPT-400 welders are being equipped with the automatic quality control system. In AMg and AMtsAM alloy (3x3 mm), a minimum nugget diameter is ensured with a push-back of 0.30 mm. Orig. art. has: 8 figures and 2 tables. [AZ]

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 003/ ATD PRESS: 5060
11/-

Card 2/2 *egk*

L 43925-66 EWT(d)/EWT(m)/EWP(c)/EWP(v)/T/EWP(t)/ETI/EWP(k)/EWP(l) IJP(c) JM/PM/JH
 ACC NR: AP6027440 SOURCE CODE: UR/135/66/000/008/0004/0007

AUTHOR: Orlov, B. D. (Candidate of technical sciences); Marchenko, A. L. (Engineer); Lipovskiy, P. I. (Engineer); Zaytsev, M. P. (Candidate of technical sciences) *ca)* B
78
68

ORG: MATI

TITLE: Selection of parameter for automatic control of spot welding of aluminum alloys 14 16

SOURCE: Svarochnoye proizvodstvo, no. 8, 1966, 4-7

TOPIC TAGS: aluminum base alloy, copper containing alloy, magnesium containing alloy, metal welding, weld evaluation, automatic control/ D16AT aluminum alloy, AMg6 aluminum alloy, AMtsAM aluminum alloy

ABSTRACT: Results are presented of a theoretical and experimental investigation of spot welding D16AT, AMg6 and AMtsAM aluminum alloys to determine a reliable parameter on which an automatic quality control of spot welds can be based. Effects of welding time, welding current, spot spacing, electrode radius, and electrode pressure on nugget diameter and thickness, magnitude of electrode "push back" (under effect of thermal expansion of welded metal), voltage drop on electrodes, and power were studied. Alloy specimens 30x200x1—2.5 mm in size were

Card 1/2

UDC: 621.791.763.1.08:669.715

1. 24504-66

ACC NR: AP6007716

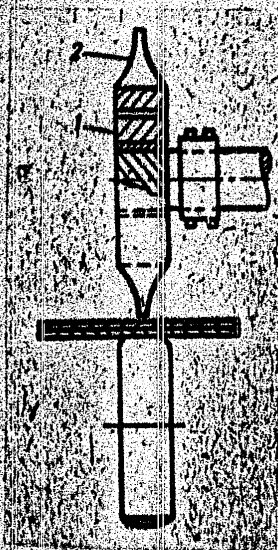


Fig. 1. Ultrasonic seam-welding unit. 1 - magnetostrictive converter; 2 - disk device

SUB CODE: 13/

SUBM DATE: 24Feb64/

Card 2/2. BLC

L 24504-66 EWT(a)/EWT(b)/EWP(r)/T/EWP(t)/EWP(k)/EWP(h)/EWP(l) JD/HM
 ACC NR: AP5007716 SOURCE CODE: UR/0413/66/000/003/0118/0118

AUTHOR: Zaytsev, M. P.; Kholopov, Yu. V.; Smirnov, A. S.

ORG: none

TITLE: Ultrasonic seam-welding unit. Class 49, No. 178656

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki,
 no. 3, 1966, 118

TOPIC TAGS: welding, ultrasonic welding, seam welding, ultrasonic welder

ABSTRACT: An Author Certificate has been issued for an ultrasonic seam welder equipped with a magnetostrictive converter and a disk device. To ensure continuous feeding of ultrasonic vibrations to the welding zone, the magnetostrictive converter is in the form of a ring with the disk mounted on top of it (see Fig. 1). [LD]

Card 1/2

UDC: 621.791.16.002.5

110-30-5-10/27

The Use of the Hall Effect to Investigate Processes of Contact-
welding

ASSOCIATION: VNIIESO

SUBMITTED: August 3, 1957

Card 4/4

1 24504-66 EWT(a)/EWT(m)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(l) JD/HM

ACC NR: AP5007716

SOURCE CODE: UR/0413/66/000/003/0118/0118

110-58-5-18/25

The Use of the Hall Effect to Investigate Processes of Contact-welding

magnetic field of a contact-welding machine by making measurements in three directions at a number of points. The value of the magnetic field is directly proportional to the e.m.f. determined.

The emitter can be used to record the secondary power curve of the machine. For this purpose, the secondary voltage of the machine is applied to the electrodes of the emitter, which is placed in the magnetic field of the secondary circuit. The scale can easily be determined. An oscillograph of secondary power of a welding machine is shown in Fig.4.

The emitter is useful for automatic and programming control of welding processes and for automatic welding control. Emitters will provide for stabilisation of welding current by creating negative feedback between the secondary current and primary voltage. Similarly, the energy of the welding impulse may be regulated, the welding current being automatically disconnected when the energy reaches a certain value. The Hall-effect emitter is very convenient in that the output signal can be controlled by altering either the field intensity or the current passed through the emitter. There are 4 figures.

Card 3/4

110-58-5-18/25

The Use of the Hall Effect to Investigate Processes of Contact-welding

field and the Hall effect is measured by means of a potentiometer. A secondary current oscillogram for a welding machine, type MTP-75, obtained by an emitter of $5 \times 10 \times 0.5$ mm, is shown in Figure 2A. The Hall e.m.f. was directly recorded by the oscillograph element without amplification. For purposes of comparison, the same curve was recorded by the usual devices, including a toroid system and integrating amplifier (Figure 2B) and a special non-inductive shunt (Figure 2C). The first of these methods is complicated and in the second, the shunt entails disturbing the secondary circuit. The Hall effect method is simple and no change need be made in the operating conditions of the welder. In many cases, the oscillograph scale can be calculated and when it is required to calibrate the oscillograph this can be done by connecting a non-inductive shunt between the electrodes of the machine. A cathode ray-oscillograph can be used to make rapid measurements of secondary current. The results of measurements by this method of secondary current amplitudes for a machine, type MTP-75 as a function of open-circuit voltage are plotted in Fig.3. The Hall-effect emitter is a means of investigating the

Card2/4

110-58-5-18/25

AUTHORS: Zaytsev, M.P. and Rozov, I.A., Engineers

TITLE: The Use of the Hall Effect to Investigate Processes of Contact-welding (Ob ispol'zovanii effekta Kholla pri issledovanii protsessov kontaktnoy svarki)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, Vol 29, Nr 5, pp 53 - 5 (USSR)

ABSTRACT: Until recently, it has been difficult to use the Hall effect technically because with available materials the effect was too small. Now, newly-developed semi-conductors such as germanium, indium-antimony, indium-arsenic and others, having a high mobility of space-charge carriers, make it possible to use this effect more easily. It provides a means of investigating the secondary current in contact-welding, a matter of considerable importance which has hitherto presented difficulties. If a Hall-effect emitter is placed in the magnetic field set up by the secondary current of the welder and the Hall effect is recorded on an electro-mechanical oscillograph, the resulting curve will represent the field strength and secondary current. A schematic diagram of the arrangement is given in Figure 1. The emitter is placed close to a current-carrying part of the machine in a direction perpendicular to that of the magnetic

Card 1/4

SOV/135-58-12-12/20

AUTHORS: Aksel'rod, F.A., Zaytsev, M.P., Engineers

TITLE: A Seam Welding Machine for Welding Stainless Steel Parts of Different Thickness (Shovnaya mashina dlya svarki detaley raznoy tolshchiny iz nerzhavayushchey stali)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 12, pp 33-35 (USSR)

ABSTRACT: Detailed information is presented on a machine designed by VNIIESO for welding annular hermetic seams in stainless steel parts of different thickness, with 0.01 sec. pulse duration. The parts to be welded are compressed by special devices fixed in a drum-type driving head. The driving head rotates in a rigid bearing and is actuated by worm gears from a "BP-1" type driving gear (designed by Engineer B.J. Nikonov). The machine is equipped with a synchronous ignitron breaker ensuring stable and high-quality weld joints. There is 1 photo, 2 diagrams, 1 circuit diagram and 1 oscillogram.

ASSOCIATION: VNIIESO

Card 1/1

New systems and equipment ...

8/135/61/000/009/002/006
A006/A101

sign of a four-channel experimental computer with the following technical characteristics: control limits for each position -- 0.02 - 2 sec; voltage of feed circuit 36 v (50 cycles); 15 v amp power; maximum efficiency 750 cycles/min. Tests made with the experimental model proved its highly reliable operation, unaffected by voltage oscillations, magnetic and electric interferences. The electric block diagram of an interrupter for seam, spot and pulse welding is given. (Author's Certificate no. 591265 of February 1, 1958 in the name of M.P. Zaytsev) Its magnetic elements are made of toroidal ferrite cores of 4 - 10 mm diameter. The analyzed systems show that a reduced number of standard components makes it possible to solve a series of problems connected with the programmed control of welding machines. These systems do not require the use of electronic tubes and thyatrons and are therefore more reliable, homogeneous and compact than dekatron systems. Moreover VNIIESO developed magnetic element systems for reliable and compact devices to control the ignition circuits of interrupter ignitrons, three-phase and multi-spot machines and other electric welding equipment. Such a system is different from all the other ignition systems by the possibility of exciting the ignitrons and controlling the ignitron operation through a single channel using one power supply source of the igniting pulses. There are 7 figures and 3 references; 2 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: VNIIESO

Card 2/2

S/135/61/000/009/002/006
A006/A101

AUTHOR: Zaytsev, M.P., Engineer

TITLE: New systems and equipment for controlling the welding process

PERIODICAL: Svarochnoye proizvodstvo, no. 9, 1961, 6 - 9

TEXT: Investigations carried out at VNIIESO have shown that the most promising trends in the development of timers and other electric welding equipment is the utilization of the physical properties of ferromagnetic materials with a straight hysteresis loop, and of semiconductor devices. On the basis of these elements a number of contactless computer systems for the controlling of welding machines was developed. Computer components, such as accumulation cells, blocking oscillators, contactless relays to control electropneumatic valves and other parts, were designed at VNIIESO. Some examples of the systems and machines developed are given. One of the computer systems described, operates on magnetic elements and semiconductors and assures any number of consecutive controllable pauses. Its operation is based on the principle of pulse counting from a sufficiently stable frequency source. Simple accumulation cells with shifting registers are used as pulse counters. The described system was employed for the de-

Card 1/2

Noise-resistant attachment ...

S/135/61/000/008/007/011 1
A006/A101

fully eliminated in the described attachment due to the absence of a tensiometric amplifier and a grid power supply. The attachment is fed from an accumulator battery. The electric circuit diagram of the device is given. Tests yielded satisfactory results. There are 8 figures and 3 Soviet-bloc references.

ASSOCIATION: VNIIESO

Card 3/3

Noise-resistant attachment ...

S/135/61/000/008/007/011
A006/A101

namometer is compressed, the spring suffers longitudinal bending causing the deformation of the tensiometric pickups. An idle spring (without pickups) of adjusted rigidity, clamped between the plates, serves to extend the range of recording the tension. The rigidity of the spring corresponds to that of the dynamometer which must be variable depending on the magnitude of tension. The described tension pickup differs from a rheostatic pressure pickup by the absence of "free motion", higher accuracy of recording dynamic deformations, and greater stability during long-lasting operation. Power and current are recorded by a double pickup, consisting of two germanium plates with soldered leads (according to the Hall effect system) and armored in one box. They are glued onto both sides of the cooling plate. A combined pick-up instead of two separate ones eliminates the necessity of controlling the strength of the magnetic field. In a combined pickup both its elements are penetrated by the same field. The maximum permissible strength of the field (4,000 oersted) corresponds to the double amplitude of the welding current curve on the oscillograph screen, which is approximately equal to the screen height for the given attachment. Therefore, if the welding current does not extend beyond the limits of the screen, the permissible strength of the field is automatically assured. Noises are practically

Card 2/3

S/135/61/000/008/007/011
A006/A101

AUTHORS: Zaytsev, M.P., Rozov, I.A., Engineers

TITLE: Noise-resistant attachment to an oscillograph for controlling resistance welding conditions

PERIODICAL: Svarochnoye proizvodstvo, no. 8, 1961, 20 - 22

TEXT: A noise-resistant tensometric device in the form of attachment РТУМ-2 (RTUM-2) to an oscillograph was developed at VNIIESO. This attachment makes it possible to record simultaneously the tension between the electrodes, the welding current (within 4000 - 200,000 amps) and the power in the secondary circuit (within 5 - 600 kw). The limits of recording the tension if applied directly to the pick-up are 40 - 400 kg; when recorded from the cantilever deflection they are 100 - 600 kg. The attachment contains tension, power and current pickups assuring the direct recording of these quantities with a МПО-2 (MPO-2) oscillograph without an amplifying device. For recording the tension a deformed flat spring is used on both sides of which constantan wire pickups, 30 μ in diameter and 106 ohm resistance, are glued and gathered into a bridge system of seven pick-ups on each arm. The spring is clamped between two parallel plates. If such a dy-

Card 1/3

GUL'DENBAL'K, A.P.; ZAYTSEV, M.P.

Ferromagnetic converter with Hall transducer for measuring secondary currents in resistance welding. Avtom. svar. 14 no.5:49-54 My '61.
(MIRA 14:5)

1. Leningradskiy politekhnicheskij institut im. M.I.Kalinina (for Gul'denbal'k). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut elektrosvarochnogo oborudovaniya (for Zaytsev).

(Electric welding—Equipment and supplies)
(Transducers)

ZAYTSEVA, M.P.; KARTASHEVA, Ye.K.

Rheumatic fever occurrence in some occupational groups of
workers. Vop.revm. 1 no.3:74-79 J1-S '61. (MIRA 16:4)

1. Iz organizatsionno-metodicheskogo otdela (zav. - prof. B.G.
Leyt's) Gosudarstvennogo nauchno-issledovatel'skogo instituta
revmatizma (dir. - deystvitel'nyy chlen AMN SSSR prof. A.I.
Nesterov) Ministerstva zdravookhraneniya RSFSR.
(RHEUMATIC HEART DISEASE)

26788

S/125/61/000/005/006/016

A161/A127

A ferromagnetic converter with a Hall pickup for...

fields. The converter is a ring core made of band or sheet metal with a high magnetic inductivity and provided with one or several air gaps. The converter amplifies the signal from the pickup by about 20 times, which permits oscillograph records of secondary currents with maximum $\leq 4,000$ amp in the pulse. It is stated that pickups of indium arsenide have lower temperature sensitivity than pickups of other materials (0.02 - 0.08% per 1°C), and that the pickup core can have one air gap only if the main purpose is to amplify the signal whereas the effect of magnetic materials and changes in the secondary circuit are excluded. Otherwise the pickups must be provided with several gaps, as described by F. Kuhrt, K. Maaz [Ref. 8; Messung hoher Gleichströme mit Hallgeneratoren, ETZ-A, vol. 76, no. 14, 487, 1956]. The article includes the calculation of the system. Results of some experiment measurements with the converter are given. There are 8 figures and 8 references: 7 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Leningradskiy politekhnicheskoy institut im. M. I. Kalinina (Leningrad Polytechnic Institute im. M. I. Kalinin) (A. P. Gul'denbal'k); VNIIESO (M. P. Zaytsev)

SUBMITTED: December 14, 1960

Card 2/2

1.2300 only 2208

26788
S/125/61/000/005/006/016
A161/A127

AUTHORS: Gul'denbal'k, A. P., Zaytsev, M. P.

TITLE: A ferromagnetic converter with a Hall pickup for measurements of secondary currents in resistance welding

PERIODICAL: Avtomaticheskaya svarka, no. 5, 1961, 49 - 54

TEXT: The authors give a description of a ferromagnetic converter with a Hall pickup. It presents an improved version of a PTC-1 (RTS-1) welding current recorder [Ref. 4: M. P. Zaytsev, I. A. Rozov, Registratsiya svarochnogo toka s ispol'zovaniyem effekta Kholla (Recording welding current using the Hall effect), VINITI, 1959] that had been developed using data of studies carried out at VNIIESO [Ref. 2: M. P. Zaytsev, I. A. Rozov, "Vestnik elektropromyshlennosti", no. 5, 1958]. The Hall pickup in the RTS-1 had the shape of a sonde that has to be placed close to the conducting element of the secondary circuit of the welding machine. The outer magnetic fields caused errors and difficulties, and the sonde-pickups could only be used for recording currents beginning with 4,000 amp. The new design is combined with a special ferromagnetic converter. It permits the measurement of secondary currents regardless of the effect of magnetic materials and outer magnetic

Card 1/2

SOV-125-58-A-14/16

On Electric Circuits of Machines for Contact Welding of Thin Metal

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut elektrosvaroch-
nogo oborudovaniya (All-Union Scientific Research Institute
of Electric Welding Equipment)

SUBMITTED: February 4, 1958

1. Welding equipment--Circuits

Card 2/2

AUTHOR: Zaytsev, M.P.

SOV-125-52-8-14/16

TITLE: On Electric Circuits of Machines for Contact Welding of Thin Metal (Ob elektricheskikh skhemakh mashin dlya kontaktnoy svarki metalla maloy tolshchiny)

PERIODICAL: Avtomaticheskaya svarka, 1958, Nr 8, pp 84-88 (USSR)

ABSTRACT: General information is given on electric circuits of equipment for welding thin metal, and their defects are discussed. Also, a new capacitor machine for seam welding thin metal, developed at VNIIESO in 1957, is described (block diagram shown in Figure 3). This machine ensures higher frequency of welding pulses at a higher efficiency and improves work conditions for the welding transformer. It is mentioned that in 1957 VNIIESO developed experimental models of synchronous control a.c. welders (MShR-25 and MShPS-50), for welding metal of 0.1 - 0.5 mm thickness, which gave satisfactory results in tests. There are 2 circuit diagrams, 1 graph and 3 Soviet references.

Card 1/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100025-6

ZAYTSEV, M. P.

Dissertation: Investigation of the Process of Pressing Siftines." Cand Tech Sci, Moscow Technological Inst of the Food Industry, 28 Apr 54. (Vechernyaya Moskva, Moscow, 26 Apr 54)

SO: SUM 243, 19 Oct 1954

ZAYTSEV, M.P., inzh.

New diagrams and equipment for the control of welding. Svar.
proizv. no.9:6-9 S '61. (MIRA 14:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektrosvarochnogo
oborudovaniya.
(Welding---Equipment and supplies)
(Automatic control)

ZAYTSEV, M.P., inzh.; ROZOV, I.A., inzh.

Noise-proof attachments on oscillographs for the control of
resistance welding conditions. Svar. proizv. no.8:20-22
Ag '61. (MIRA 14:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektrosvarochnogo
oborudovaniya.
(Electric welding---Equipment and supplies)
(Oscillography)

ACC NR: AP7001397

SOURCE CODE: UR/0413/66/000/021/0072/0073

INVENTOR: Zaytsev, M. P.

ORG: none

TITLE: A method of electric-arc welding. Class 21, No. 187894 [announced by the All-Union Scientific Research Institute of Electric Welding Equipment (Vsesoyuznyy nauchno-issledovatel'skiy institut svarochnogo oborudovaniya)]

SOURCE: Izobreteniya, promyshlennye obraztsy, tovarnyye znaki, no. 21, 1966, 72-73

TOPIC TAGS: metal welding, arc welding, electric pulse welding, welding equipment

ABSTRACT: This Author Certificate introduces a method of continuous or pulsed-power arc welding. To improve the precision of the weld deposition and to facilitate the initiation of the arc, the arc gap is ionized with an electron, ion, or laser beam focused at the point being welded. [MS]

SUB CODE: 13/ SUBM DATE: 18May65/ ATD PRESS: 5110

Card 1/1

UDC: 621.791.89

ACC NR: AP6035923

SOURCE CODE: UR/0413/66/000/020/0183/0183

INVENTOR: Zaytsev, M. P.; Kholopov, Yu. V.; Smirnov, A. S.

ORG: none

TITLE: Ultrasonic welding tool. Class 49, No. 187492

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 183

TOPIC TAGS: ultrasonic welding, welding ~~WELD~~ EQUIPMENT

ABSTRACT: This Author Certificate introduces an ultrasonic welding tool which consists of a resonator bar and working tip. To improve weld quality the tip is made in the form of a truncated cone, the smaller base of which forms the supporting area of the tool. Orig. art. has: 1 figure.

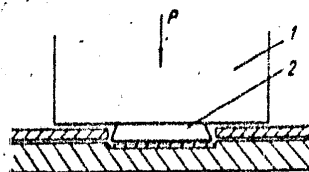
SUB CODE: 13/ SUBM DATE: 01Apr64/

Card 1/1

UDC: 621.791.16.03

ACC NR: AP6018010

Fig. 1. 1 - working tip; 2 - cutting edge



Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 05Oct64

Card 2/2

ACC NR: AP6018010

(N)

SOURCE CODE: UR/0413/66/000/010/0126/0126

INVENTORS: Zaytsev, M. P.; Kholopov, Yu. V.; Mukhachev, A. M.

ORG: none

TITLE: An instrument for ultrasound welding of metals. Class 49, No. 181966
[announced by All-Union Scientific Research Institute of Electric Welding Equipment
(Vsesoyuznyy nauchno-issledovatel'skiy institut elektrosvarochnogo oborudovaniya)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 10, 1966, 126

TOPIC TAGS: metal cutting, metal blade, metal cladding, welding, ultrasound welding

ABSTRACT: This Author Certificate presents an instrument for ultrasound welding of metals. The instrument contains a working tip (see Fig. 1). To increase the productivity in the process of cladding one metal with another, the working tip is provided with a cutting edge. This permits a detail to be simultaneously clad and cut out.

Card 1/2

UDC: 621.791.16.03

AKSEL'ROD, Feliks Aronovich; GUL'DENBAL'K, Aleksey Pavlovich;
ZAYTSEV, Mikhail Pavlovich; YURINOV, V.M., nauchnyy red.;
BONDAROVSKAYA, G.V., red.; PERSON, M.N., tekhn. red.

[Fundamentals of electrical engineering and electronics; a
manual for electric welders] Osnovy elektrotekhniki i elektro-
niki; dlia elektrosvarshchikov. Moskva, Vses. uchebno-
pedagog. izd-vo Proftekhizdat, 1961. 183 p. (MIRA 15:2)

(Electric engineering) (Electronics)
(Electric welding--Handbooks, manuals, etc.)

AKSEL'ROD, F.A., inzh.; ZAYTSEV, M.P., kand. tekhn. nauk; ZLOBIN, G.I., inzh.; KOCHERGIN, K.A., kand. tekhn. nauk; NEKRASOV, B.M., inzh.; SLIOZBERG, S.K., nauchnyy red.; DONSKOY, A.V., nauchnyy red.; DEMYANTSEVICH, V.P., nauchnyy red.; SARAFANOV, S.G., nauchnyy red.; BONDAROVSKAYA, G.V., red.; DORODNOVA, L.A., tekhn. red.; PERSON, M.N., tekhn. red.

[Resistance welding] Kontaktnaya svarka. [By] F.A.Aksel'rod i dr. Moskva, Proftekhizdat, 1962. 463 p. (MIRA 15:12)
(Electric welding)

ZAYTSEV, M. N.

4492. Us ershenstvovaniye Tekhnologii v O Elasticheskogo Proizvodstva.
(M.), Sudpomigz, 1954. 36 s. s. Ill. 2sm. (Proizvod, Opty. 1.000kz. Dopl.-
(54-58023) I 621. 791 3t.

SO: Ietopis' Zhurnal'nykh Statey, Vol. 37, 1949

ZAYTSEV, M.N.

Coefficients of integral analytic functions. Vest, Mosk. un. Ser. mat.,
mekh., astron., fiz., khim. 12 no. 3:3-8 '57. (MIRA 11:3)

1. Kafedra teorii chisel Moskovskogo gosudarstvennogo universiteta.
(Functions, Analytic)

ZAYTSEV, M.N.

Complete systems of whole analytic functions. Vest.Mosk.un.Ser.mat.,
mekh.,astron.,fiz.,khim. 13 no.4:3-15 '58. (MIRA 12:4)
(Functions, Analytic)

On Complete Systems of Entire Analytic Functions SOV/55-58-4-1/31

therefrom there follows a well-known result of Gel'fond on complete systems, and some conclusions.
There are 5 Soviet references.

SUBMITTED: April 4, 1958

Card 3/3

On Complete Systems of Entire Analytic Functions

507/55-58-4-1/3

$$A_k(z) = \frac{1}{2\pi i} \int_{|\eta|=r_k} \frac{f(z, \eta) d\eta}{(\eta - \alpha_0) \dots (\eta - \alpha_k)}$$

$$G_k = \frac{1}{2\pi i} \int_{|\xi|=R_1 < R} \frac{F(\xi)}{\xi} \int_0^\infty \left(\frac{x}{\xi} - \alpha_0 \right) \dots \left(\frac{x}{\xi} - \alpha_{k-1} \right) d\tau(x) d\xi;$$

The points $\alpha_0, \dots, \alpha_k$ lie in $|\eta|=r_k$ and for all $|z| < R_1 < R$ and $\xi < \varepsilon_0$ it holds

$$|R_n(z)| < e^{o(n)} \left(\frac{r + \frac{\varepsilon}{2}}{R} \right)^n, \quad r = |z|.$$

Two conclusions assert that the remainder term vanishes in the polynomial case and that in the case $\frac{|\alpha_n|}{n} \rightarrow 0$ for $n \rightarrow \infty$ the representation (1) is somewhat simpler. Three further theorems contain a generalization of the principal theorem;

Card 2/3

16(1)~

AUTHOR: Zaytsev, M.N.

SOV/55-58-4-1/31

TITLE: On Complete Systems of Entire Analytic Functions (O polnykh sistemakh tselykh analiticheskikh funktsiy)

PERIODICAL: Vestnik Moskovskogo universiteta, Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1958, Nr 4, pp 3-16 (USSR)

ABSTRACT: The author joins the investigations of A.O.Gel'fond [Ref 1], A.I.Markushevich [Ref 2], and A.F.Leont'yev [Ref 3]. Let

$$f(z) = \sum_{n=0}^{\infty} a_n z^n, \quad a_n = \sigma^{\frac{n}{s}} \left[\Gamma\left(\frac{n}{s} + 1\right) \right]^{-1}$$

and $\{\alpha_n\}$ be a complex number sequence, $|\alpha_n| = \beta_n$, $\max_{0 \leq i \leq n} \beta_i = \bar{\beta}_n$.

Principal theorem: If $\frac{(\bar{\beta}_n)^s}{n} \rightarrow 0$ for $n \rightarrow \infty$, then for every function $F(z)$ analytic in $|z| < R$ there holds the representation

$$(1) \quad F(z) = \sum_{k=0}^n C_k A_k(z) + R_n(z).$$

Here

Card 1/3

ZAYTSEV, N., leytenant

Spirit of the battery collective. Komm. Vooruzh. Sil 46
no.19:54-56 O '65. (MIRA 18:12)

DUBINSKAYA, F.Ye.; ZAYTSEV, M.M.

Use of multitubular turbulent-foam scrubber for cleaning converter
gases. Stal' 25 no.8:864-866 3 '65. (MIRA 18:9)

SOV/137-58-9-18730

Gas Cleaning in Cyclones and Cyclone Banks

relative efficiency is introduced: $E_{rel} = \epsilon_1 / \epsilon_0$ ($\epsilon_1 = 1 - \eta_1$ and $\epsilon_0 = 1 - \eta_0$), where η_1 is the efficiency of the C undergoing comparison and η_0 is the efficiency of the TsN-15 model C taken as the standard. Comparative data are adduced for C of identical diameter of the NIIOGAZ, LIOT, and certain foreign models. The highest efficiencies are those of the NIIOGAZ model TsN-15 and the TsNS-8 C. Results of comparative testing of the NIIOGAZ, LIOT, SIOT, and others of identical capacities are presented. In this comparison, the TsN-15 and TsNS-8 also show the best results. The special features of the TsN-15 and SIOT are examined, and a number of advantages afforded by the former are noted. See also RZhMet, 1958, Nr 8, abstracts 16596-16603.

G.G.

1. Gases--Cleaning
2. Industrial equipment--Performance

SOV/137-58-9-18730

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 83 (USSR)

AUTHOR: Zaytsev, M.M.

TITLE: Gas Cleaning in Cyclones and Cyclone Banks (Ochistka gazov v tsiklonakh i gruppovykh tsiklonakh)

PERIODICAL: Sb. materialov po pyleulavlivaniyu v tsvetn. metallurgii. Moscow, Metallurgizdat. 1957, pp 312-330

ABSTRACT: Improvement in the effectiveness of gas cleaning in cyclones (C) is attained by reducing the diameter of the C (C banks, multiple C) and by improving C design. A classification of C is presented: Cylindrical-conical C, C with dust fairings, etc. C may be classified as follows by intake arrangement: a) Tangential gas intake (simple or with a helical upper portion [the NIIOGAZ, SIOT and other C]); b) with spiral gas feed - simple and with a helical upper portion (Ts NIIOGAZ series TsNS). A number of concepts are postulated on the relationships between the geometrical dimensions of C. These pertain chiefly to cylindrical C (of the NIIOGAZ model). The desirability of employing C banks, which have a number of advantages over multiple C, is noted. For convenience in comparing C, the concept of

Card 1/2

SOV/133-59-2-25/46

Scrubbing of Ferromanganese Gas of Dust

necessary to build 2-3 ventury sprayers for each plant so as to enable their isolation in turn for cleaning from solid deposits. There are 11 figures, 3 tables and 4 references of which 3 are Soviet and 1 English.

ASSOCIATION: NIIOGAZ i Kosogorskiy Metallurgicheskiy Zavod
(NIIOGAZ and Kosaya Gora Metallurgical Works)

Card 6/6

SOV/133-59-2-25/26

Scrubbing of Ferromanganese Gas of Dust

velocity of gas in the active zone of electrostatic precipitator in fig. 11. The results obtained indicated the suitability of the equipment for the fine cleaning of gas. The basic problem which still requires solution is the prevention of the formation of solid deposits, particularly in the ventury sprayer. During tests 20 mm thick deposits were formed in the outlet of the diffuser in 10 days which prevented its further operation. On the basis of the results obtained the following conclusions are drawn: 1) fine cleaning of blast furnace gas from ferromanganese furnaces can be carried out in an electrostatic precipitator with a preliminary cleaning in the ventury sprayer at a gas velocity in the active zone of the electrostatic precipitator of the order of 1.5 m/sec and the hydraulic resistance in the sprayer of 300-350 mm H₂O. 2) In spite of the insignificant depositions of solids on the hurdles in the scrubber, the use of non-filled scrubber is recommended. 3) For the industrial application of the gas cleaning scheme it is

Card 5/6

SOV/133-59-2-25/26

Scrubbing of Ferromanganese Gas of Dust

therefore the "turbulent washer" was found to be inadequate for the purpose. The operation of the electrostatic precipitator was tested in conjunction with the ventury sprayer and hurdled scrubber. The supply of water to ventury was constant and amounted to 1000 litres/hr of which 300 litres/hr passed through the central sprayer and 700 litres/hr in the form of peripheral film, the specific consumption of water was from 0.1 to 0.27 litres/m³ and from 0.25 to 0.60 litres/m³ respectively. Specific consumption of water in the scrubber was 3-4 litres/m³ of gas. Consumption of water in the electrostatic precipitator was 300-350 litres/hr per peripheral metre of hurdles. Periodic washing of electrodes was done twice per shift for 10-12 minutes. The experimental results are given in table 3. The dependence of the dust content of clean gas on the density of corona current and on the voltage of feeding current are given in figures 8 and 9 respectively, the dependence of the dust content at the inlet and outlet of the electrostatic precipitator on the hydraulic resistance of the ventury sprayer in fig.10 and the dependence of the dust content in clean gas on the

Card 4/6

SOV/123-59-2-25/26

Scrubbing of Ferromanganese Gas of Dust

The scrubber, of a diameter of 200 mm with two rows of hurdles (fig.5), was calculated for a gas velocity of 1.5 m/sec. Water for spraying the hurdles was supplied through 8 sprayers. The electrofilter of the DM type (fig.6) 1500 mm in diameter contained 7 precipitating tubes with an internal diameter of 300 mm (external 325 mm) which were continuously washed. An additional periodic washing of precipitating tubes and electrodes with "solvent" sprayers was provided. The chemical composition of samples of flue dust and their size distribution and chemical composition of the individual size fractions are given in tables 1 and 2 respectively. Flue dust possesses hydraulic properties -- on decreasing moisture content to 50% it solidifies. Tests of the "turbulent washer" (ventury sprayer and cyclone) as a complete unit indicated that at the average dust content of dirty gas of 10 gr/m^3 the residual dust content from 200 to 150 mg/m^3 at a hydraulic resistance of the ventury tube from 700-900 mm of water respectively (fig.7). The above dust content is above the permissible limits and

Card 3/6

SOV/133-59-2-25/20

Scrubbing of Ferromanganese Gas of Dust

gas after the ventury sprayer could be directed either to the cyclone (in order to test "turbulent" washer as a self-contained cleaning plant) or into the scrubber followed by an electrostatic precipitator (in order to test electrostatic precipitator with a preliminary washing in the ventury sprayer as a self contained plant). In both cases the cleaned gas was discharged into the atmosphere. The dimensions of the ventury sprayer (fig.3) were so calculated as to obtain a gas velocity in the ventury about 115 m/sec at a throughput of about 1600 m³/hr. Water for spraying was supplied through a tube situated along the ventury axis, with 16 nozzles of 2.5 mm in diameter. To prevent the sedimentation of dust on the surface of the tube a continuous film of water, along the whole perimeter, was maintained (see fig.3). The consumption of water for the latter was constant (610-670 l/hr per linear metre of tubes periphery). For the same reason water was supplied to the cyclone of 440 mm in diameter (fig.4) in an amount of 600 litres/hr through four injectors placed tangentially to the internal cross section of the apparatus (at an angle of 8-10°).

Card 2/6

SOV/133-59-2-25/26

AUTHORS: ~~Zaytsev, M.M.~~, Makarov, A.I., Tarnavskiy, I.L. and
Tseytlin, A.Ya., Engineers

TITLE: Scrubbing of Ferromanganese Gas of Dust
(Ochistka ferromargantsevoogo gaza ot pyli)

PERIODICAL: Stal', 1959, Nr 2, pp 181-188 (USSR)

ABSTRACT: The results of an investigation on the most suitable method of cleaning blast furnace gas from ferromanganese furnaces carried out on a pilot plant installation are described. There are two specific features in cleaning blast furnace gas from ferromanganese furnaces:
1) a large amount of fine particles and 2) on wet cleaning solid deposits are formed on the working surfaces of the gas cleaning plant which rapidly decrease the efficiency of cleaning and necessitate stoppages for cleaning of the plant. The lay out of the experimental plant is shown in figures 1 and 2. It consisted of a "turbulent washer" (a combination of a ventury sprayer and cyclone), scrubber with hurdles, electrostatic precipitator, high pressure blower used as a transporting installation and measuring apparatus. The plant was designed in such a way that the

Card 1/6

TIMOFEEV, N.S.; ZAYTSEV, M.M.; YEPLITSKIY, V.I.; VAL'DBERG, A.Yu.

Collecting highly dispersed carbon black by means of the
new bag filters made with thermochemically processed glass
fiber fabrics. Kauch. i rez. 22 no.6:34-37 Je '63. (MIRA 16:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut po
promyshlennoy i sanitarnoy ochistke gazov.
(Carbon black) (Filters and filtration)
(Glass fibers)

SOV/124-58-8-8955

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 8, p 90 (USSR)

AUTHORS: Teverovskiy, Ye.N., Zaytsev, M.M.

TITLE: The High-speed Dust-catching Heat-exchange-type Absorber
"TP" (Pyleulavlivayushchiy, absorbtsionnyy i teploobmennyy
apparat "TP" s vysokoskorostnym potokom gaza)

PERIODICAL: Tr. Gos. n.-i. in-ta po prom. i san. ochistke gazov, 1957,
Nr 1, pp 105-132

ABSTRACT: An examination is made of a dust-catching device characterized by a very thorough gas-cleaning capacity. The device consists of two jointly operating units: The one - a nozzle-type liquid atomizer in a Venturi tube; the other - a drop collector consisting of a uniflow cyclone. The liquid (water) is sprayed into the gas at high velocities (20-150 m/sec), the spray droplets measuring from 6 to 65 μ . The article includes some theoretical calculations and test data. Bibliography: 21 references.

A.V. Kur'yato

Card 1/1

ZAYTSEV, M. M.

V 22.2
FU HIGH SPEED DUST RECOVERY, ABSORPTION AND HEAT EXCHANGE APPARATUS.
Zaitsev, M. M. and Tsvetkovskii, E. N. (Mik. Prom. (Chem. Ind., Moscow), 1955,
82-873 A, 187, in Chem. Abstr., 1955, vol. 49, 13701i). Gas scrubbers based
on gas bubbling through liquids and on spray washing with liquids are
described and their output is calculated, largely from foreign literature data.
C.A.

①

ZAYTSEV, M. M.

USSR/Chemistry - Gas and air purification

FD-1802

Card 1/1 Pub 50-6/19

Author : Zaytsev, M. M.; Teverovskiy, Ye. N., Cand Chem Sci

Title : A high-velocity dust-capturing absorption and heat-exchange apparatus

Periodical : Khim. prom., No 2, 82-87 (18-23), Mar 1955

Abstract : Describe the operational characteristics of turbulent scrubbers (Venturi scrubbers, etc), which can be used for the purification of air and gases from dust. The gases are cooled effectively in these scrubbers by reason of the great surface of the finely dispersed liquid used for scrubbing. Eight references, 2 USSR, both since 1940. Five figures, 2 graphs, 4 tables.

Institution: Scientific Research Institute of Industrial and Sanitary Gas Purification;
State Planning Institute of Gas Purification (Giprogazoochistka)

ZAYTSIV, M.M., inzh.; MAKAROV, A.I., inzh.; TARNAVSKIY, I.L., inzh.;
TSEYTLIN, A.Ya., inzh.

Ferromanganese gas purification from dust. Stal' 12 no.2:181-
188 E '59. (MIRA 12:2)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut promyshlennoy
i sanitarnoy ochistki gazov i Kosogorskiy metallurgicheskiy zavod.
(Ferromanganese--Metallurgy) (Fly ash) (Electric filters)

ANDRIANOV, A.P.; ZAYTSEV, M.M.; IDEL'CHIK, I.Ye.; POPOV, D.D.[deceased];
TEVEROVSKIY, Ye.N.; UZHOV, V.N.; CHUMAK, L.I.; SHAKHOV, G.F.;
SHIROKOV, F.A.; TOMCHINA, Ye.I., red.; ZAZUL'SKAYA, V.F., tekhn.
red.

[Battery cyclones; instructions for designing, assembling, and
operating] Batareinye tsiklony; rukovodiashchie ukazaniya po
proektirovaniyu, montazhu i ekspluatatsii. 2. izd. Moskva, Gos.
nauchno-tekhn.izd-vo khim. lit-ry, 1959. 103 p. (MIRA 15:1)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po khimii.
(Separators (Machines))

On the Effect of the Point of Liquid Injection
Upon the Hydraulic Resistance and the Efficiency
of the Turbulent Scrubber

64-58-3-14/20

bers with more points of injection are listed provided
that the basic data are known.

There are 6 figures, 2 tables and 11 references, 6 of
which are Soviet.

1. Gas scrubbers--Hydrodynamic characteristics 2. Gas
scrubbers--Design 3. Liquids--Injection 4. Gases--Properties

Card 3/3

On the **Effect** of the Point of Liquid Injection
Upon the Hydraulic Resistance and the Efficiency
of the Turbulent Scrubber

62-50-3-14/20

of the gas, as well as the velocity of the current of gas at the outflow of the liquid, the specific water consumption and the dimensions of the spray pipe. Thereby it was observed that the rate of distribution of the liquid depends greatly on the point, where the liquid is injected to the central flow. From experiments on the influence of the hydraulic resistance of the spray pipe and of the place of addition of the liquid it was observed among others that at higher values of the specific water exchange a more pronounced decrease of the values of the hydraulic resistance coefficient with an approach of the point of injection contrary to the current of gas takes place. It was observed that the optimum arrangement of the point of injection, which corresponds to an optimum gas purification, depends mainly on the specific liquid exchange and very little on the gas velocity, and by application of Reynold's criterion a possibility of calculation is given for a determination, whereby also calculation formulae for bigger turbulent scrub-

Card 2/3

AUTHORS: Zaytsev, M. M., Murashkevich, F. I. 64-58-3-14/20

TITLE: On the Effect of the Point of Liquid Injection Upon the Hydraulic Resistance and the Efficiency of the Turbulent Scrubber (O vliyani mesta podachi zhidkosti na gidravlicheskiye soprotivleniye i effektivnost' raboty turbulentnogo promyvatel'ya)

PERIODICAL: Khimicheskaya Promyshlennost', 1958, Nr 3, pp 50-55 (USSR)

ABSTRACT: As there were no systematics given in an earlier published paper as regards the subject mentioned in the title, in the present work experiments were carried out by an injection of water from the periphery to the center and vice versa whereby a laboratory-equipment was used and the brine of a Moscow coal as dust. By a critical analysis, already carried out, of the process of distribution of the liquid in turbulent scrubbers it has been found that for the optimum case the point of injection of the liquid must be determined by the outflow velocity of the liquid from the feed pipe end, the specific weight and the kinematic viscosity

Card 1/3

ZAYTSEV, M.M.; TIMOFEEYEV, N.S.; VAL'DBERG, A.Yu.

Efficient cyclones for catching the new types of carbon
black. Kauch.i rez. 21 no.5:33-38 My '62. (MIRA 15:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut po
promyshlennoy i sanitarnoy oчитke gazov.
(Separators (Machines))
(Carbon black)

ZAYTSEV, M.M.

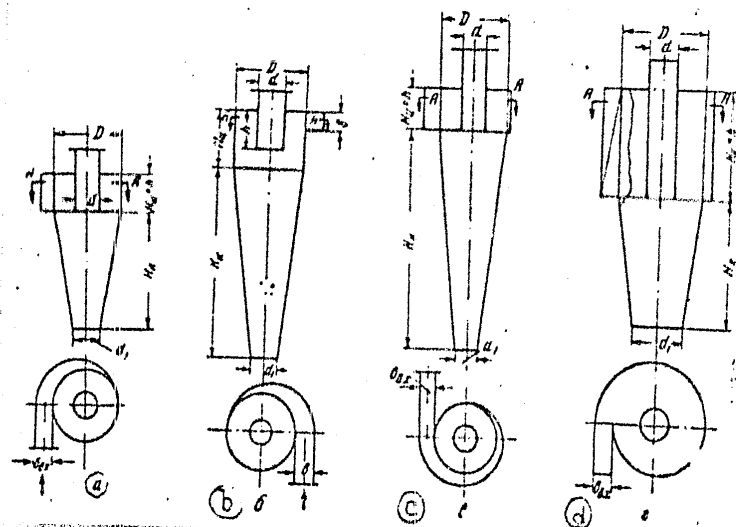
Prospects for the application of dry cleaning to blast-furnace gas.
Trudy NTO chern. met. 20:446-452 '60. (MIRA 13:10)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut promyshlennoy
i sanitarnoy ochistki gazov.
(Gas purification) (Blast furnaces)

Effective cyclones for the recovery of

S/138/62/000/005/009/010
A051/A126.

Figure 1: Diagram of the cyclones. a - cyclone SK-TsN-34; b - cyclone SKTs-TsN-38; c - cyclone SDK-TsN-33; d - cyclone SKK-TsN-34.



Card 2/2

S/138/62/000/005/009/010
A051/A126

AUTHORS: Zaytsev, M.M.; Timofeyev, N.S.; Valdberg, A.Yu.

TITLE: Effective cyclones for the recovery of new types of carbon black

PERIODICAL: Kauchuk i rezina, no. 5, 1962, 33 - 38

TEXT: A study for determining the most effective cyclones to be used in recovering "dry" furnace carbon black led to the conclusion that the conical shape with a spiral gas-feed pipe was the most practical one. The best working conditions for it were investigated. The most economic cyclone model for recovering carbon black is said to be the CK-IIH-34 (SK-TsN-34) (Fig. 1a). This type shows a better purification efficiency with an increased flowing speed at the intake. The authors compare in the article various parameters of the 4 cyclone models.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy institut po promyshlennoy i sanitarnoy ochistke gazov (State Scientific Research Institute for Industrial and Sanitary Purification of Gases)

Card 1/2

ZAYTSEV, M.M., inzh.; MURASHKEVICH, F.I., inzh.

Effect of the usable portion of rods on the operational efficiency
of a rod-type fly-ash collector. Izv. vys. ucheb. zav.; energ. 3
no. 9:83-90 S '60. (MIRA 13:9)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut po promyshlen-
noy i sanitarnoy oчитке газов.
(Dust collectors)

ZAYTSEV, M.M.; MURASHKEVICH, F.I.

Effect of the location of the liquid delivery on the hydraulic
resistance and operational efficiency of turbulence scrubbers.
Khim. prom. no.3:178-183 Ap-May '58. (MIRA 11:6)
(Dust collectors)

Giprogaz Gas Cleaning Specifications for *НИИОГАЗ* multi cyclones and single cyclones. (Cont.)

112-2-2793

c) almost two times less metal is used in their fabrication. The specifications give a detailed description of the engineering design of *НИИОГАЗ* multi-cyclones and single cyclones, taking as a base the pressure-drop (Δp)- to-the-specific-gravity-of-the-gas-dependence under operating conditions (γ t). This must be within the $\approx 55-75$ range. In calculating cyclone efficiency, the effect of particle form, the adhesiveness of the dust and the number of cyclone elements are not taken into account. For this reason the calculated efficiencies are only a guide. In the specifications being examined, the introduction of stricter tolerances in the basic dimensions of the cyclone elements is of the first importance. Attention must be drawn to this in their fabrication and assembly. The specifications give basic recommendations for operating *НИИОГАЗ* multi-cyclones and single cyclones, and for installing control and measuring instruments.

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N.F.D.

Giprogaz Gas Cleaning Specifications for *ГВИИОГАЗ* Multi cyclones and
Single cyclones. (cont.)

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Cyclones with the cyclone cover angle at $\alpha = 15^\circ$ (*ЦН* - 15) are recommended. Such cyclones have a head of 40 to 60 mm of water. In addition to the *ЦН* - 15 cyclones, the specifications cite still other cyclones with $\alpha = 15^\circ$, and with a shortened cylindrical part (*ЦН* - 15-11), with $\alpha = 11^\circ$, a cyclone of higher efficiency (*ЦН* - 11) and with $\alpha = 24^\circ$, a cyclone of higher productivity (*ЦН* - 24). Cyclones can be assembled in batteries. In the type of battery recommended, the individual elements are mounted on flanges. Eight is the maximal number of cyclones in a battery. The installation of cyclones of greater than 800 mm diameter is not recommended because approximately the same efficiencies can be realized in other, more compact ash separators. For this reason, *ГВИИОГАЗ* cyclones are recommended when the volume of flue gases does not exceed 35,000 to 40,000 cu m/hr. The *ЦН* - 15 type cyclones operating in parallel have the following advantages over multi-cyclones: a) they ensure more constant efficiency and are less likely to become fouled by ash during operation; b) under special conditions determined by the fractional composition of the entrained ash, they give greater ash separating efficiency;

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Giprogaz Gas Cleaning Specifications for *НИИТАЗ* Multi cyclones and Single Cyclones. (Cont.)

For this reason the specifications give recommendations as to the area of their utilization. The multicyclone gas distributing chambers can be rectangular or wedge shaped in form (in the latter case the upper supporting plate is installed at an angle to the horizontal). The specifications, however, specify materials for rectangular chambers only. Multi-cyclones, without the horizontal platforms where entrained material can accumulate, are given in the specifications. Such apparatus can be used in turf burning boilers. Given the condition that the distribution of the gases must be even, the number of cyclone elements in the rectangular section must not exceed 160 (16 elements along the horizontal plane and 10 rows in depth). The gas inlet to and the gas outlet from the multicyclones must be in the form of symmetrical nozzles in order to ensure even distribution of the flue gases over the multi-cyclone elements. The problem of ensuring even ash distribution requires a special solution. For the same hydraulic head, the *НИИТАЗ* cyclone ensures better gas cleaning than cyclones of other types which have found wide application in industry. The inlet angle of the gas flow, determined by the angle of the cyclone cover, has an important influence on cyclone efficiency.

Card 2/4

ZAYTSEV, M.M.

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AUTHOR: Zaytsev, M. M.

TITLE: Giprogaz Gas Cleaning Specifications for *НННГАЗ* Multi cyclones and Single Cyclones (Normali giprogazoochistki na batareynnye tsiklony i tsiklony NIIOGAZ).

PERIODICAL: Tr. konferentsii po vopr. Zoloulavliv., shlakozoloudaleniya i shlakozoloispol'zov. Moscow, Gosenergoizdat, 1955, pp. 47-55

ABSTRACT: The specifications consist of three parts: a) description, design and construction; b) assembly and servicing; c) blueprints of the cyclones and of cyclone elements. The cyclone designs being recommended are more efficient and reliable in operation than the *УП* type cyclone in use earlier. The cyclone elements can be equipped with the "ВННТ" and "РОЗЕТКА" vortex-type apparatus, 250, 150 and 100 mm in diameter. The last two sizes are used when a high degree of gas cleaning is required. The elements with the "РОЗЕТКА" are more effective, but in individual cases they are less reliable in operation.

Card 1/4

ZAYTSEV, M.M.
ZAYTSEV, M.M.

NIIOGAZ

"Normali Giprogazoochistki Na Betareynye Tsiklony i Tsiklony Niiofaz,"
Proceedings of a Conference on Problems of Ash Removal, Ash and Slag Removal
and Ash and Slag Utilization. (Trudy Konferentsiya Po Votrodam Zoloulavlivaniya,
Shlakozoloulavlivaniya i Shlarozoloispol'zovaniya). U.S.S.R. Gosenergoizdat
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(Rolling (Metalwork))

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